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Swarbrick

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[54] **ANCHOR**

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[51] **Int. Cl.**[4] **B63B 21/00**

[52] **U.S. Cl.** **114/302;** 114/301; 114/303

[58] **Field of Search** 114/293, 294, 301, 302, 114/303, 308, 309

[56] **References Cited**

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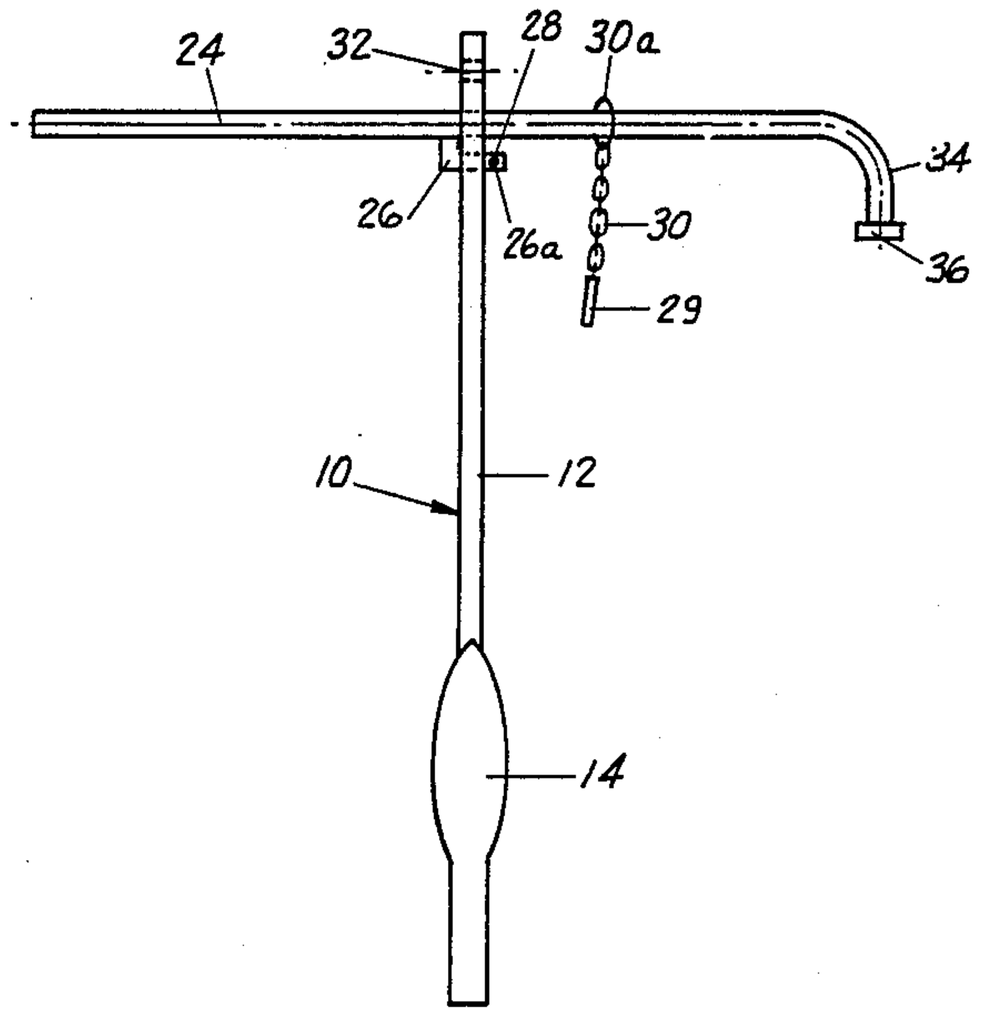
[57] **ABSTRACT**

The present invention relates in one aspect to an anchor comprising a shank portion and a stock portion, the stock portion extending through a first aperture in the shank portion and extending laterally of the shank portion when in use, but being demountable so as to be removable from the first aperture in the shank entirely or so as to be moveable in the first aperture to a position where it can be orientated substantially in alignment with the shank, wherein the stock is fitted with a keeper which in the operative position of the stock, is engageable with a second aperture in the shank of the stock spaced from the first aperture, said keeper being provided with means to enable it to be retained in the second aperture. The present invention also relates to an anchor comprising a shank portion and a fluke portion wherein in the assembled condition of the anchor, the shank portion is mounted in an aperture in the fluke portion and the fluke portion and the shank portion can be disassembled when not required for use.

7 Claims, 4 Drawing Figures



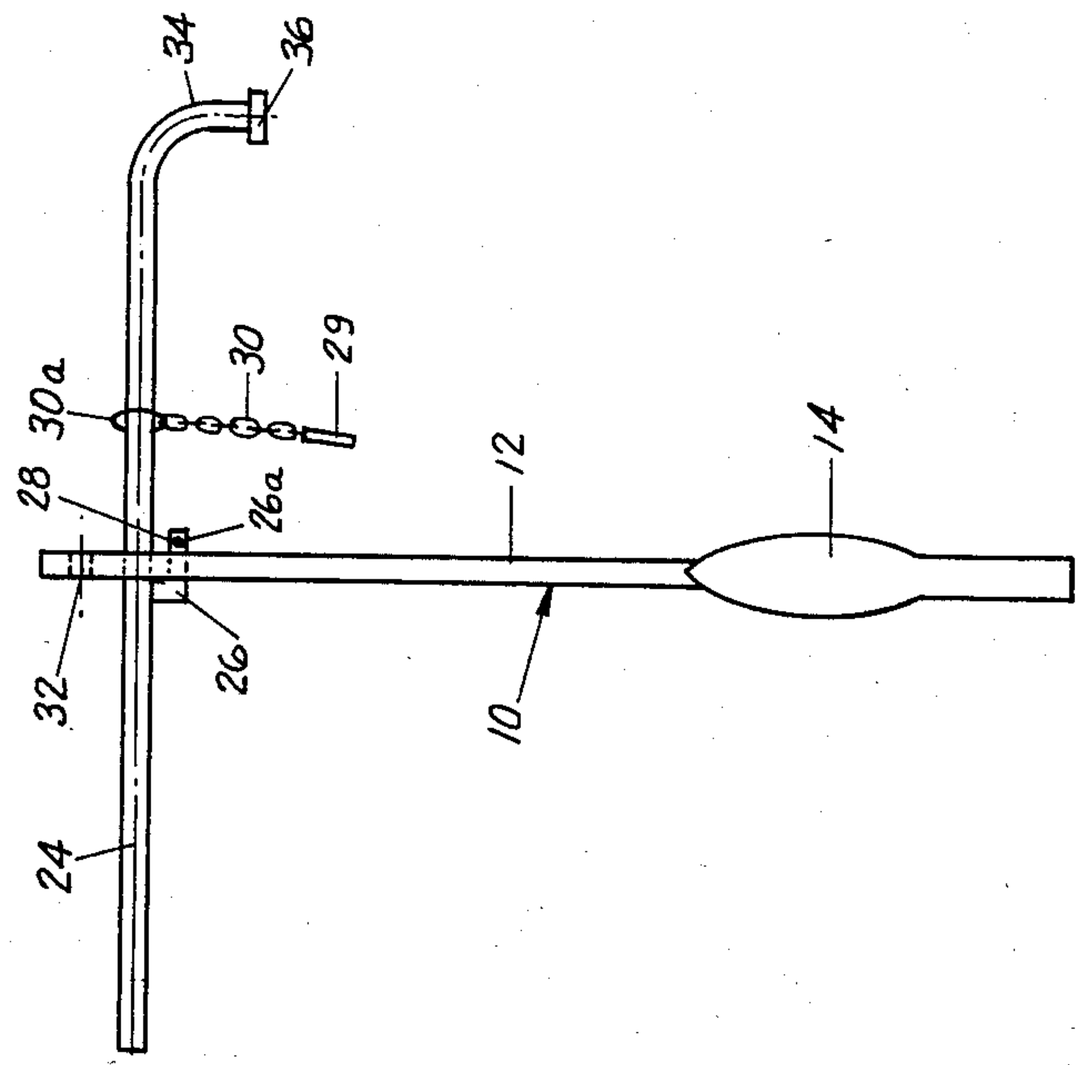


FIGURE 2

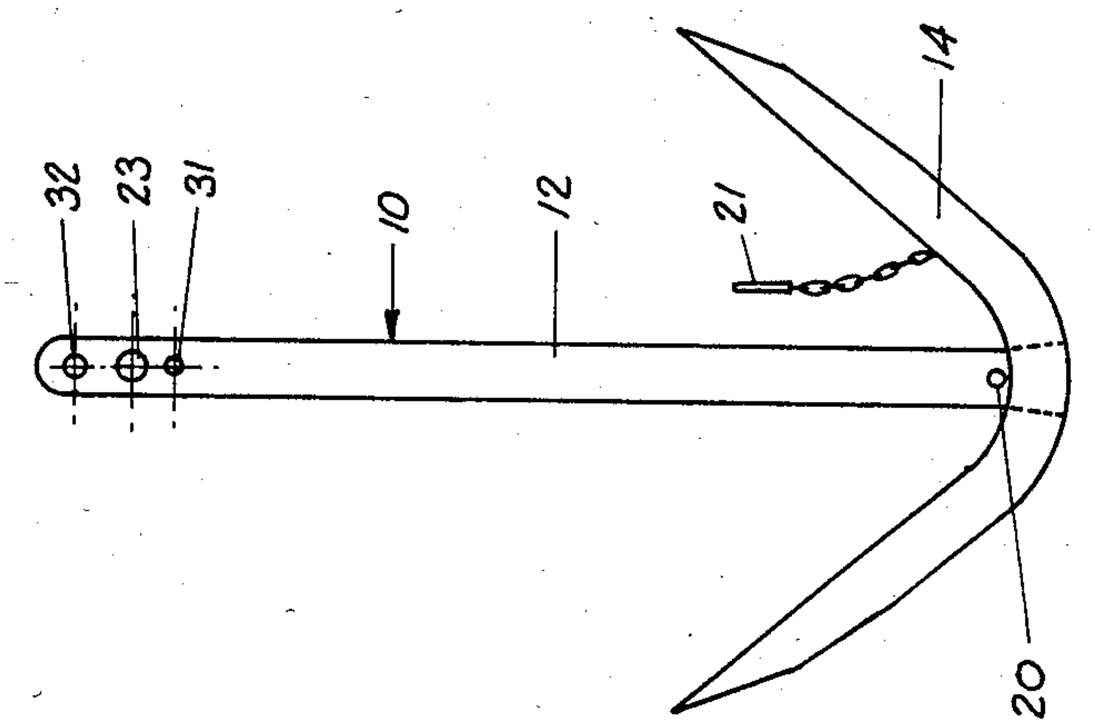


FIGURE 1

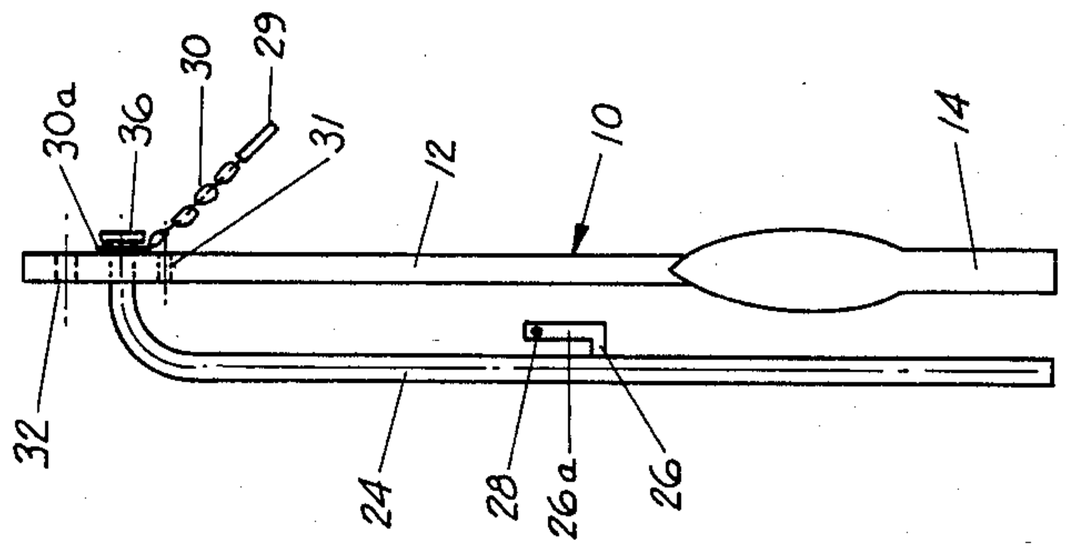


FIGURE 4

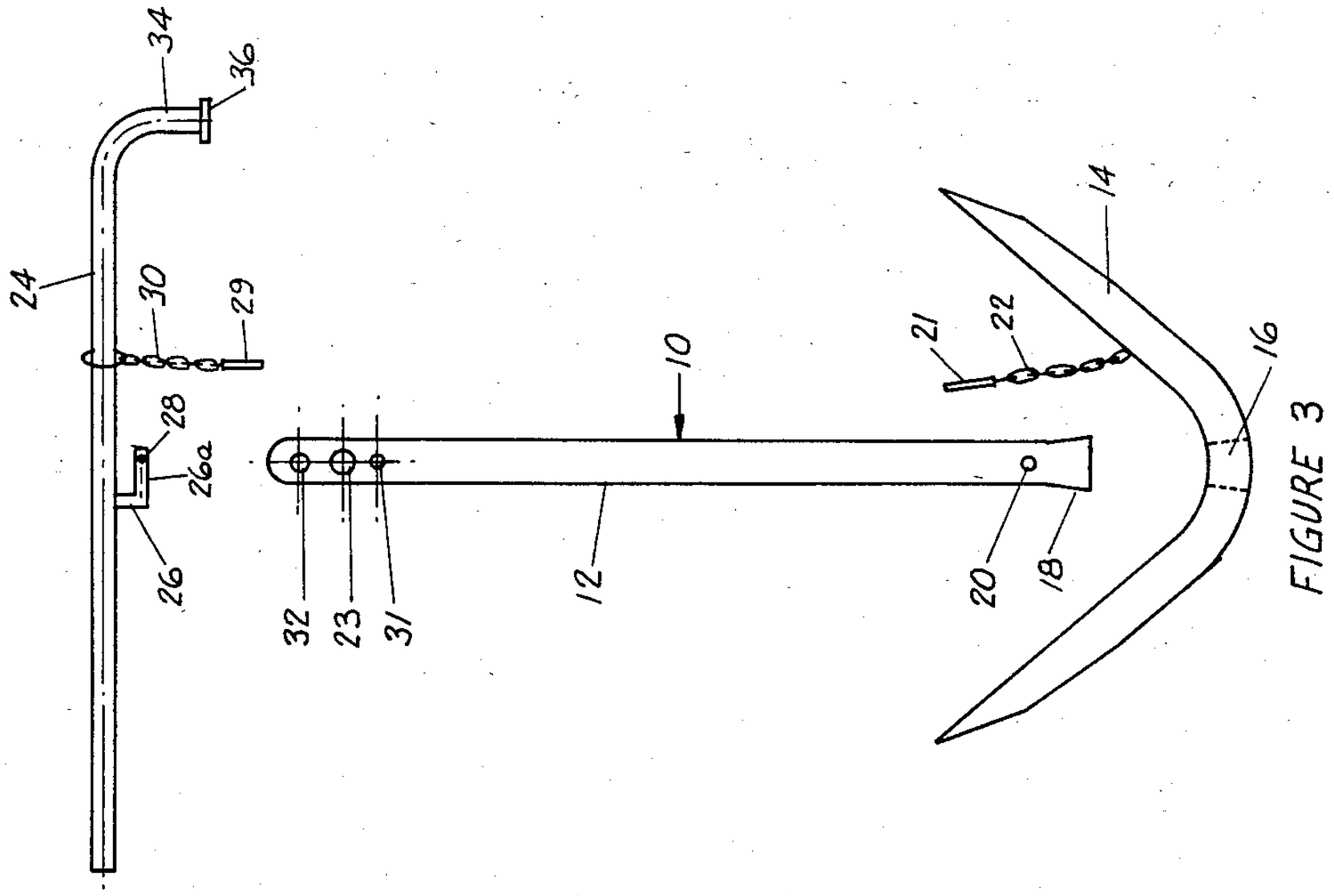


FIGURE 3

ANCHOR

The present invention relates to an anchor.

In accordance with one aspect of the present invention there is provided an anchor comprising a shank portion and a fluke portion wherein in the assembled condition of the anchor, the shank portion is mounted in an aperture in the fluke portion and the fluke portion and the shank portion can be disassembled when not required for use.

In accordance with another aspect of the present invention there is provided an anchor comprising a shank portion and a stock portion, the stock portion extending through a first aperture in the shank portion and extending laterally of the shank portion when in use, but being demountable so as to be removable from the first aperture in the shank entirely or so as to be moveable in the first aperture to a position where it can be orientated substantially in alignment with the shank, wherein the stock is fitted with a keeper which in operative position of the stock, is engagable with a second aperture in the shank spaced from the first aperture, said keeper being provided with means to enable it to be retained in the second aperture.

The present invention will now be described, by way of example, with reference to the accompanying drawings, in which:

FIG. **1** is a front elevation of an anchor in accordance with the present invention in partly assembled condition but not including stock portion;

FIG. **2** is a side elevation of the anchor of FIG. **1** in assembled condition;

FIG. **3** is an exploded front elevation showing the component parts of the anchor of FIGS. **1** and **2** in disassembled condition; and

FIG. **4** is a side elevation of the anchor of FIGS. **1** and **2** with a stock portion in demounted condition.

In the drawings, there is shown an anchor **10** of the admiralty type comprising a shank portion **12** and a fluke portion **14**.

The shank portion **12** is mounted in a rectangular section aperture **16** in the centre of the fluke portion **14** (see FIG. **3**). To effect the mounting, the aperture **16** is tapered (as can be seen in FIG. **3**) and the end of the shank **12** which fits in the aperture **16** is correspondingly tapered at **18**. In the embodiment shown, the aperture **16** is tapered only on the sides which are side on in FIGS. **1** and **3** and can be seen in phantom in these figures, but it could be tapered on its other sides also. Also, whilst still being tapered it could have a round or ellipticle or other section. The shank portion **12** is engaged with the fluke portion **14** by inserting the end of the shank portion **12** remote from the tapered end **18** foremost into the aperture **16**. The shank portion **12** is then passed through the aperture **16** unitl the tapered end **18** engages snugly with the aperture **16**.

In use, it is found that the shank portion **12** remains firmly engaged with the fluke portion **14** and in general the shank portion **12** does not slide through the aperture **16** so that the aperture **16** and tapered end **18** become disengaged.

However, if desired the shank portion **12** can be provided with a small aperture **20** arranged to receive a stainless steel split pin **21** or similar locking pin means so as to prevent relative movement of the shank portion **12** relative to the fluke portion **14**. The split pin **21** can be secured in known manner by splaying its free ends outwardly once it is located in the aperture **20**. The split pin **21** may conveniently be attached to the fluke portion **14** by means of a chain **22** which prevents the pin **21** being lost or dropped in use. The chain **22** may be connected to the fluke portion **14** by being welded to the fluke portion **14**.

At the end remote from the tapered end **18** the shank portion **12** is provided with an aperture **23**. The aperture **23** is arranged to receive a stock **24** which, as shown in FIG. **1**, in use, extends laterally of the shank portion **12**. The use of a stock is known and the stock **24** is designed to ensure that the fluke portion **14** remains side on to the sea bed or the like in use.

As can best be seen in FIG. **3**, the stock **24** has a keeper or dowel **26** attached thereto such as by welding. The keeper **26** is a right angled member having an outer portion **26***a* extending parallel to the stock **24**. The said outer portion **26***a* is provided adjacent its outer end with a small aperture **28** arranged to receive a stainless steel split pin **29** or similar locking pin means. The split pin **29** can also be secured by splaying its free ends outwardly once it is loaded in the aperture **28**. Conveniently, the split pin **29** may be attached to the stock **24** by means of a chain **30** which prevents the pin **29** being lost or dropped in use. The chain **30** may be connected to the stock **24** by means of a stainless steel ring **30***a* which is slidably mounted on the stock **24** to enable the stock **24** to be moved to the demounted position shown in FIG. **4**.

Further, the shank portion **12** comprises a second aperture **31** spaced from the first aperture **22** towards the tapered end **18** of the shank portion **12**. The second aperture **31** is arranged to receive the outer portion of the keeper **26** when the stock **24** is engaged with the aperture **23** as can be seen in FIG. **2**.

Further, the shank portion **12** comprises a third aperture **32** spaced from the first aperture **22** on the side thereof remote from the tapered end **18**. A shackle (not shown) of known type may be placed about the aperture **32**.

The shackle is arranged to have a chain or rope or the like attached to it.

Further, in the assembled condition as shown in FIG. **2**, the split pin **29** or the like is inserted in the aperture **28** so that the keeper **26** is retained in the aperture **28** and cannot slip out of the aperture **28**.

Still further, as shown, the stock **24** is of a type which has an end **34** extending laterally from the remainder of the stock **24**. The said laterally extending end **34** typically has a nut **36** or other abutment member attached to its free end. This prevents the said end **34** passing through the aperture **23**. Thus, the stock **24** is not removable in its entirety from the shank portion **14** while the nut **36** is in place but is still demountable so as to lie substantially in alignment with the shank portion **12** in storage as shown in FIG. **4**.

In use, the anchor **10** is assembled by passing the shank **12** through the aperture **16** until the tapered end **18** engages snugly with the aperture **16**. Then the split pin **21** may be inserted and secured in the aperture **20** if present.

Subsequently, the stock **24** can be passed through the aperture **23** until the keeper **26** engages with the aperture **31**. Then the split pin **29** is inserted and secured in the aperture **28** to firmly retain the keeper **26** in place in the aperture **28**. By using the keeper **26** there is no need to interfere with the stock **24** in a way which could

reduce its strength such as by cutting a slot in it as has been done in the past.

Further, a shackle can be placed about the aperture **32** and secured to the anchor **10** by a pin or the like in known manner, to attach the anchor **10** to a chain or the like.

When not required for use, the anchor **10** can be readily placed in the demounted condition shown in FIG. **4** by the reverse of the procedure described above. If it is desired to remove the stock **24** completely then the nut **36** can simply be removed from the stock **24** to enable the end portion **34** to pass completely through the aperture **23**.

Modifications and variations such as would be apparent to a skilled addressee are deemed within the scope of the present invention. For example, the stock **24** need not have the portion **34** described above. It could be completely straight and be arranged to be removed completely from the shank **12** in the demounted condition of the anchor **10**.

I claim:

1. An anchor comprising a shank portion, a fluke portion, a stock portion extending through a first aperture in the shank portion and extending laterally of the shank portion when in use, but being demountable so as to be removable from the first aperture in the shank portion entirely and so as to be movable in the first aperture to a position where it can be oriented substantially in alignment with the shank portion, wherein the shank portion contains a second aperture which is spaced from the first aperture in the shank portion, the stock portion is fitted with a keeper comprising an inner portion attached to and extending away from the stock portion and an outer portion attached to the inner portion, extending parallel to the stock portion and being spaced from the stock portion, the keeper in the operative position of the stock being engageable with the second aperture in the shank portion and the outer portion of the keeper being provided with means to enable the keeper to be retained in the second aperture.

2. An anchor according to claim **1**, in which the outer portion of the keeper is provided with an aperture arranged to receive a locking pin when the keeper is located in the second aperture to retain the keeper in place in the second aperture.

3. An anchor according to claim **2**, in which a locking pin is attached to the stock portion for insertion in the aperture in the keeper.

4. An anchor according to claim **1**, in which the stock portion has a laterally extending end portion provided with an optionally removable abutment means to prevent the stock portion from passing entirely through the first aperture such that the stock portion can be moved to a demounted position in which it is oriented substantially parallel to the shank for storage.

5. An anchor according to claim **4**, in which the outer portion of the keeper is provided with an aperture arranged to receive a locking pin when the keeper is located in the second aperture to retain the keeper in place in the second aperture and in which the locking pin is attached to the stock portion by means of a slidably mounted ring mounted about the stock portion between the abutment means and the shank.

6. An anchor according to claim **1**, in which the shank portion is mounted in an aperture in a fluke portion and the fluke portion and shank portion can be disassembled apart from each other when not required for use.

7. An anchor according to claim **6**, in which the shank portion contains an aperture adjacent the fluke portion, said aperture adjacent the fluke portion being arranged to receive a locking pin to prevent relative movement between the shank portion and the fluke portion.

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